CLAIMS

1. An ultrasonic flowmeter comprising two ultrasonic transceivers mounted in spaced relation to each other in an axial direction on the outer peripheral surface of a pipe through which a fluid flows, said ultrasonic flowmeter determining a flow velocity of said fluid by receiving an ultrasonic vibration transmitted from one of said two ultrasonic transceivers through the fluid in said pipe with the other ultrasonic transceiver, alternately switching between the ultrasonic transceiver at the transmitting end and the ultrasonic transceiver at the receiving end, and measuring the ultrasonic wave propagation time between the two ultrasonic transceivers,

wherein each of the ultrasonic transceivers comprises a cylindrical transmitting body fixed to the outer peripheral surface of said pipe so as to surround said pipe and an ultrasonic transducer spaced apart from the outer peripheral surface of said pipe, said transmitting body having axial end surfaces perpendicular to the axis of said pipe, said ultrasonic transducer having axial end surfaces each fixedly secured to said axial end surfaces of said transmitting body, said ultrasonic transducer adapted to be expanded and contracted in axial direction by applying a voltage between said axial end surfaces of said ultrasonic transducer.

2. The ultrasonic flowmeter according to claim 1, wherein said ultrasonic transducer has a shape of a disk with a hole.

3. The ultrasonic flowmeter according to claim 1, wherein said transmitting body has a substantially conical shape having an outer diameter progressively decreasing from one axial end surface with said ultrasonic transducer fixedly secured thereto toward the other axial end surface.

4. The ultrasonic flowmeter according to claim 2, wherein said transmitting body has a substantially

conical shape having an outer diameter progressively decreasing from one axial end surface with said ultrasonic transducer fixedly secured thereto toward the other axial end surface.

5. The ultrasonic flowmeter according to claim 1, wherein said transmitting body is made of a metal material.

6. The ultrasonic flowmeter according to claim 4, wherein said transmitting body is made of a metal material.

7. The ultrasonic flowmeter according to claim 1, wherein said ultrasonic transducer and said transmitting body are divided into a plurality of parts in the peripheral direction along the outer peripheral surface of said pipe.

8. The ultrasonic flowmeter according to claim 1, wherein said transmitting body is integrated with said pipe.

9. The ultrasonic flowmeter according to claim 1, wherein said pipe is made of resin.

10. The ultrasonic flowmeter according to claim 6, wherein said pipe is made of resin.